BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

In the Matter of Application No. 96-1 OLYMPIC PIPE LINE COMPANY CROSS CASCADE PIPELINE PROJECT	TESTIMONY OF RANDALL L. PARSONS • River and Stream Crossings • Surface Water (flood and storm water control) • Land Use and Zoning

1. I, Randall L. Parsons, am a Senior Engineer with the King County Department of Development and Environmental Services. In that capacity I am called upon to evaluate whether various development proposals within unincorporated King County are in compliance with County land use and zoning requirements pertaining to flood hazard areas, floodplains and surface water management controls. I am fully familiar with these regulations as I drafted portions of King County's flood hazard standards. I submit this testimony in support of the County's position that the currently proposed pipeline is not consistent with county land use plans and zoning ordinances.

2. Flood hazard areas are defined in KCC 21A.06.475 and .080 as those areas within King County that are subject to inundation by a base flood, which is a flood having a one percent chance of being equaled or exceeded in any given year, commonly referred to as the "100 year flood," and those areas subject to risk from channel relocation or stream meander including, but not limited to, streams, lakes, wetlands, and closed depressions. Flood hazard areas consist of the

floodplain, flood fringe, zero-rise floodway and FEMA floodway. KCC 21A.24.230. A floodplain is defined in KCC 21A.06.495 and .080 as the total area subject to inundation by a base flood. A floodplain includes the flood fringe, the zero-rise floodway, and FEMA floodway. KCC 21A.06.470, 505, and 455.

Floodplains naturally store flood water, protect water quality and are valuable for recreation, agriculture, and fish and wildlife habitat. Wetlands are an integral part of a floodplain. Improper development can reduce a floodplain's ability to store and convey floodwaters, thereby increasing the velocity and depth of floodwaters in other areas. In addition, floodplain development often occurs at the expense of important fish and wildlife habitat.

3. The majority of the flood hazard areas that will be affected by the proposed project will be located adjacent to, or contained within, the streams and rivers that are crossed by the project. Affected flood hazard areas will also be found adjacent to, or contained within, most wetlands that are crossed by the project. In King County, this project will cross 69 streams and 12 wetlands that are not associated with a stream crossing. Forty-four of these stream crossings will use existing bridges that cross streams or will be buried under or over existing culverts that convey streams. The balance of the stream crossings and all of the wetland crossings are proposed to be open trenched within the stream or wetland.

4. The following Comprehensive Plan policies apply to the development or siting of facilities within flood hazard areas:

NE-330 The existing flood storage and conveyance functions and ecological values of floodplains, wetlands, and riparian corridors should be protected, and where possible, enhanced or restored.

NE-331 King County's floodplain land use and floodplain management activities should be carried out in accordance with the King County Flood Hazard Reduction Plan.

5. These policies are implemented by the following zoning code provisions regulating the components of flood hazard areas. These components are the floodplain, flood fringe, zero-rise floodway and FEMA floodway. KCC 21A.24.230. Together, these zoning code provisions preclude development from occurring within flood hazard areas unless the mandated, minimum requirements are satisfied.

- KCC 21A.24.240(A) (Development proposals in flood fringe areas shall not reduce the effective base flood storage volume of the floodplain.)

- KCC 21A.24.240(H) (Above ground utility lines within flood fringe areas shall only be allowed to transport non-hazardous materials. Buried utility lines within the flood fringe areas transporting hazardous materials shall be buried at a minimum depth of four feet below the maximum depth of scour for the base flood and shall achieve sufficient negative buoyancy so that any potential buoyancy or upward migration is eliminated.)

- KCC 21A.24.250 (Development within the zero-rise floodway shall meet the requirements for flood fringe areas in 21A.24.240 unless more restrictive standards apply.)

- KCC 21A.24.250(G) (Utilities may be allowed within the zero-rise floodway if no feasible alternative site is available.)

- KCC 21A.24.260 (Development within the FEMA floodway shall meet the requirements for zero-rise floodways in KCC 21A.24.250 unless more restrictive standards apply.)

- KCC 21A.24.275 ("No structure shall be allowed which would be at risk due to channel relocation or stream meander until promulgation of a rule.")

6. While the alternatives analysis prepared by OPL for this project does not specifically evaluate whether feasible, alternative sites are available outside of flood hazard areas, it can

generally be concluded that it is not feasible to construct a utility corridor from Snohomish County to Eastern Washington without crossing a flood hazard area at some location within unincorporated King County.

7. OPL has agreed verbally that, with respect to King County, the pipeline will be buried four feet below maximum scour depths through all flood hazard areas. Those crossings where the pipeline will use existing bridges or be buried under or over existing culverts will be outside flood hazard areas. However, where the pipeline will be placed on an existing bridge at the proposed crossing of the Snoqualmie River near the City of Snoqualmie, it will be exposed above ground for a short distance along the western approach to the bridge. This is not consistent with the provision of KCC 21A.24.240(H) that prohibits the transport of hazardous materials in above ground utility lines, but may be consistent if OPL satisfies the applicable condition described below.

8. The location of this project within flood hazard areas could be consistent with the flood hazard regulations if it is undertaken in accordance with King County's general construction standards set forth in the Testimony of Randy Sandin, King County's erosion hazard provisions set forth in the Testimony of Steve Bottheim and Terry Butler, and the following additional conditions, which implement the flood hazard regulations of KCC ch. 21A.24 and the associated King County Surface Water Design Manual ("KCSWDM") standards:

- Prior to final design of this project, a detailed engineering analysis shall be performed to delineate the boundaries of all flood hazard areas. The flood hazard boundaries shall be included on the detailed construction plans.

- All stream crossings that are proposed either over or under existing culverts will be evaluated to determine that the existing culverts are capable of conveying and containing, at a minimum, the twenty-five year peak flow and can pass enough of the 100 year peak flow, including bedload, to preclude creating or aggravating a flood or erosion problem. Culverts that do not meet this criteria shall be replaced. If the culvert is located in a fish bearing stream, the crossing shall be made fish passable.

- Pipe with a minimum wall thickness of 0.5 inches, covered with 40 mils of high density polyethylene and 1 inch of standard concrete, will be used at all stream crossings extending for the full width of the floodplain. Pipe meeting the same requirements will be used in all other floodplain areas not associated with a stream crossing.

- Within flood hazard areas, the pipeline corridor will be finish graded to match pre-existing elevations. Any excess excavated or cleared material will be removed from the corridor and disposed of in a legal manner outside of the floodplain or other sensitive areas. All work within flood hazard areas shall be completed and the corridor revegetated or otherwise stabilized prior to October 1. Within the floodway, any areas that have not fully revegetated shall be covered with mulch and netted and securely attached to the ground.

- At the Snoqualmie River crossing near the City of Snoqualmie, the pipeline shall be installed on the downstream side of the western abutment to minimize potential impacts from debris jams. During final design, special consideration shall be given to additional protection of the exposed portion of the pipeline to further reduce the potential for damage during flood events. This may include increasing the pipe wall thickness or adding additional protective covering.

Absent compliance with the standards identified in the referenced testimony and the additional conditions listed herein, the proposed project will not be consistent with King County land use plans and zoning ordinances. Because OPL has not yet complied by agreeing to these standards and conditions, the project cannot be deemed consistent and would not be approved by King County. Any site certification by the Council should at a minimum include these conditions.

9. In addition to regulating surface water in flood hazard areas, the County also more generally regulates surface water runoff caused by all types of development within unincorporated King County. The following Comprehensive Plan Policy is applicable to all development in unincorporated King County:

> **NE-310 Management of stormwater runoff shall occur through a variety of methods. Stormwater runoff caused by development shall be managed to prevent unmitigated significant adverse impacts to water resources caused by flow rates, flow volumes or pollutants to promote ground water recharge, infiltration of stormwater, when feasible given**

geological, engineering and water quality constraints. King County's current practice is to pursue non-structural methods whenever possible.

10. This plan provision is implemented in part by KCC ch. 9.04 (Surface Water Runoff Policy).

11. A Level 1 drainage analysis, as provided by KCC 9.04.030 and described in the KCSWDM, must be completed for the North Bend Pump Station. If this analysis shows that surface water runoff from this development will not exceed standards contained in the KCSWDM, currently 0.5 cfs, permanent runoff control will not be required. If runoff control is required, facilities must be designed and constructed to meet or exceed the current standards of the KCSWDM.

12. OPL has not yet complied by providing the appropriate drainage analysis or (if necessary) a permanent runoff control design. Absent compliance with these drainage standards the proposed project would not be consistent with King County land use plans and zoning ordinances, and would not be approved by King County. Any site certification by the Council should at a minimum require compliance with these drainage standards.

DATED this _____ day of _____, 1999

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Randall L. Parsons
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